

Panasonic

AJ-D950A
DVCPRO50 Studio VCR
(525/625 switchable)



DVCPRO 50

The DVCPRO50 VCR for High-End Production With Superior 4:2:2 Quality and 525/625 Ver



The AJ-D950A studio VCR uses the DVCPRO50 format to deliver the superior picture and sound quality needed in high-end video production. DVCPRO50's 50 Mbps recording rate records 4:2:2 digital component video signals at a 3.3:1 compression ratio for outstanding pictures, while four digital audio channels assure a superior sound.

Also able to record and play back in the 25 Mbps DVCPRO format, the AJ-D950A is ideal for use with news images or in extended-time program production too. Its 625/50 system capability makes it fully compatible for production in the PAL format, too.

All this performance and versatility comes in a unit that is surprisingly affordable, has a compact 4U size, and weighs only about 20 kg.

Teamed with the AJ-D900W/AJ-D910WA camera/recorder and its integrated DVCPRO50 VCR, the AJ-D950A is suitable for programs, commercials, and other high-end productions.



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DVCPRO 50

DVCPRO50 for High-End Production

DVCPRO50 Format

The DVCPRO50 format records at 50 Mbps, doubling the tape speed and recording tracks of DVCPRO. This gives you the superior quality needed in high-end video production, along with the cost-performance and ease of use of 1/4" tape.

4:2:2 Component Video

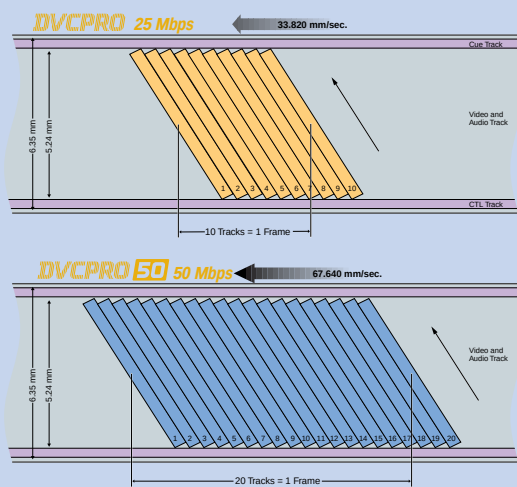
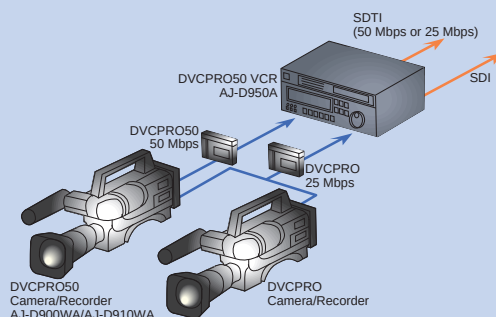
DVCPRO50 lets you create high-end video productions - such as TV commercials with chroma key, multi-layering and computer graphics - with 4:2:2 component video recording and playback on convenient 1/4" tape. Featuring a 3.3:1 compression ratio picture degradation is minimal during both compression and decompression, so the 4:2:2 images retain their superior quality.

4-Channel Digital Audio

Full 48-kHz/16-bit digital audio can be recorded on all four channels. This assures the superior sound



quality and reliability demanded in high-end video production.



DVCPRO(25 Mbps) Compatibility

DVCPRO50 integrates seamlessly with DVCPRO. DVCPRO50 VCRs can both record in the DVCPRO format and play back tapes recorded in DVCPRO(25 Mbps). When recording, you can choose to emphasize either picture quality or recording time. The recorded results then can be used with no worry about format incompatibilities.

The Picture, Sound and Editing Quality Needed in High-End Production



DVCPRO50/DVCPRO Switchable Recording

The AJ-D950A can record and play back in both the DVCPRO50 and DVCPRO formats. In DVCPRO50, the AJ-D950A can record up to 92 minutes of high-quality 4:2:2 digital component video signals onto a AJ-5P92L compact 1/4" cassette tape, while in DVCPRO mode recording time is doubled, 184 minutes*. In playback, the AJ-D950A automatically detects which format the tape was recorded in and switches accordingly. This lets you use either format without worrying about format incompatibilities.

* When recording in the DVCPRO50 format onto a DVCPRO tape, the recording time will be half that indicated on the cassette.

Records and Plays Back in the PAL System (625)

The AJ-D950A can record or play back the 625 video signals used in the PAL broadcast system. The AJ-D950A comes equipped for digital (SDI) input and output and analog component/composite output in 625.

4-Channel Digital Audio

The AJ-D950A has four channels of high-quality 48-kHz/16-bit digital audio. A level meter for each channel provides a continuous display of the recording or playback level. A linear cue audio track adds convenience when searching for edit points.

*There are two digital audio channels in DVCPRO mode.



Linear Editing with To-the-Frame Precision

The use of intra-frame compression in DVCPRO50 mode enables tape-to-tape editing with to-the-frame precision. There's no picture degradation in the edit point.

Complete Editing Functions in 50 Mbps Mode

The AJ-D950A offers both assemble and insert editing functions, and it adds preview, review and trim functions. Using the RS-422A interface, single-event editing and audio split are possible with two AJ-D950As or with one AJ-D950A and another type of VCR.



A switch in the lower front subpanel is used to select the 525 or 625 TV system. The settings for the on-screen menu are also made through operating this panel.

High-Speed Search

The AJ-D950A features shuttle search in forward and reverse at up to 32 times normal speed, as well as fast forward and review at 50 times normal speed in DVCPRO50 mode. The shuttle function includes Jog mode.

Digital Slow Motion

The AJ-D950A offers digital still and digital slow-motion playback at up to about half normal speed. Picture quality is excellent in each mode.

Channel Condition Indication

In digital recording, the channel condition indicates playback quality. Lamps on the front panel give the operator the convenience of seeing the actual condition.

Easy Set-Up With On-Screen Display

A number of initial settings can be changed easily with on-screen convenience. The display combines a simple, straight-forward control panel with a host of functions.

Compact Size, Easy Installation

With its compact 4U size, the AJ-D950A fits into a 19-inch rack using the optional AJ-MA75* rack mount adaptor for easy installation both in the studio and in OB vans. Its space-saving size and low power requirement can mean lower operating costs.

*Slide rail not included.



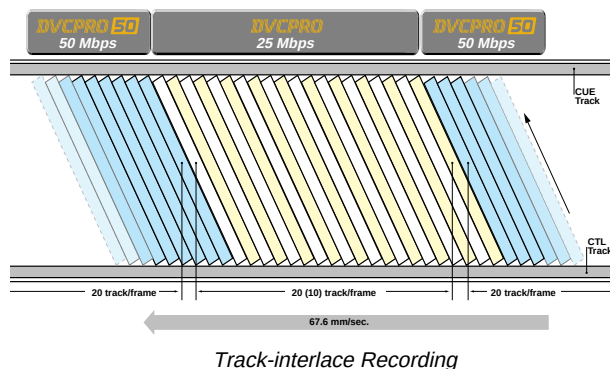
The Expandability You Need for Future Broadcast Systems

Seamless 50-Mbps/25-Mbps Recording and Playback via SDTI

An optional SDTI (Serial Data Transport Interface) allows input and output of compressed data for signals recorded in either the DVCPRO50 or DVCPRO format. The AJ-D950A outputs data at 50 Mbps when playing back a tape recorded in the DVCPRO50 format, and at 25 Mbps when playing a DVCPRO tape. The recording mode is selected manually.

This allows seamless use of DVCPRO50 and DVCPRO tapes throughout the broadcasting process, with no need to distinguish between the 50 Mbps and 25 Mbps rates. This capability was designed especially with automatic broadcasting and archive recording in mind*.

*However, if 25 Mbps data is input when the AJ-D950A is set to record in 50 Mbps mode, the data is recorded in track-interlace recording method. The recording time will be the same as if the recording were done in 50 Mbps mode, and the tape cannot be played on a DVCPRO VCR.



SDTI (Serial Data Transport Interface) System

The SDTI system uses the widely available BNC cables and routers to transfer compressed data. This advanced interface preserves full picture and sound quality by eliminating the signal degradation that's an inherent drawback of the compression/decompression process.

SDTI also includes an error correction function that assures high reliability even over distances of about 200 m.

Digital Interfaces

- The AJ-D950A comes equipped with SDI (Serial Digital Interface), allowing input/output of 525/625 digital component signals.
- SDTI is available by adding the optional AJ-YAC950 board, which then allows input/output of 525/625 digital component signals.



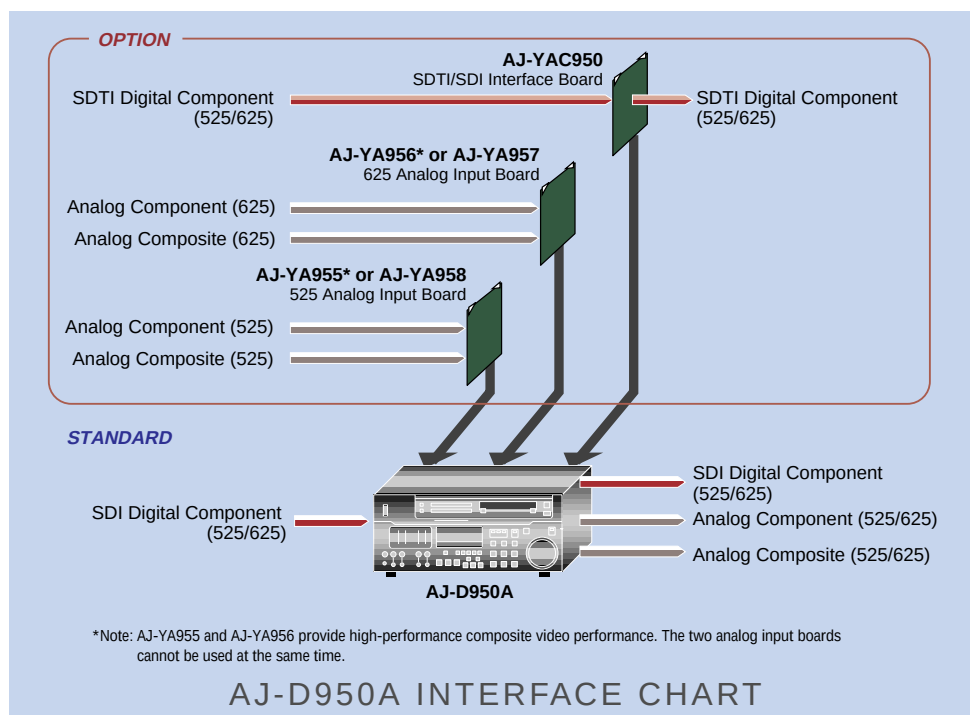
Boards containing LSI chips are easily plugged in or removed to facilitate maintenance and replacement. Simply add or exchange boards to expand the AJ-D950A's interfaces, as shown in the chart on the next page.



- The AJ-D950A comes equipped with AES/EBU digital audio in/out (4 channels).

Analog Input/Output and Remote

- The unit comes equipped to output composite/component analog video signals. Output of either 525-format or 625-format signals is also possible.
- Select from the following four optional boards for analog video input.
 - AJ-YA955: 525 High-Performance
 - AJ-YA958: 525 Standard
 - AJ-YA956: 625 High-Performance
 - AJ-YA957: 625 Standard
- The AJ-D950A comes equipped for analog audio input/output (4 channels).
- The AJ-D950A comes equipped with RS-422A (9-pin), RS-232C (25-pin) and parallel (25-pin) remote interfaces.



S P E C I F I C A T I O N S

General

Power Supply:	AC 120 V ±10%, 50 to 60 Hz
Power Consumption:	300W (full operation)
Operating Temperature:	5°C to 40°C (41 °C to 104 °C)
Operating Humidity:	10% to 90% (non dew)
Weight:	41.88 lbs (19 kg)
Dimensions (WxHxD):	16-11/16" x 6-7/8" x 16-3/8" (424 x 175 x 415 mm)
Recording Format:	DVCPRO50/DVCPRO switchable
Recording Track:	Digital Video: 525/625 switchable Digital Audio: 4 channels (50 Mbps) 2 channels (25 Mbps) TC: Cue: 1 longitudinal track CTL: 1 longitudinal track
Tape Speed:	525: 67.640mm/s 625: 67.708mm/s
Rec/Play Time:	Max. 92 minutes with AJ-5P92L
Tape:	1/4" metal particle
FF/REW Time:	Less than 3 minutes with AJ-5P92L
Search Speed:	±32x (in color)
Digital Slowmotion:	–0.43x to +0.75x
Editing Accuracy:	±0 frame (TC)
Tape Timer Accuracy:	±1 frame (continuous CTL)
Servo Lock Time:	Within 0.5 sec (color framing/standby ON)

Video

Sampling Frequency:	Y: 13.5MHz, Pb/Pr: 6.75MHz
Quantization:	8 bits
Error Correction:	Reed-solomon product code
Compression Method:	DCT and Variable-length Coding
Compression Ratio:	3.3:1 (DVCPRO50), 5:1 (DVCPRO)
Bit Rate:	50 Mbps (DVCPRO50) 25 Mbps (DVCPRO)

[Digital In/Composite Out]

525 Band width:	Y: 30Hz to 4.5MHz ±0.5dB
625 Band width:	Y: 25Hz to 4.5MHz ±0.5dB
S/N ratio:	60dB or more
K factor:	1% or less
Y/C Delay:	10 nsec or less

[Digital In/Component Out]

525 Band width:	Y: 30Hz to 5.75MHz ±0.5dB Pb/Pr: 30Hz to 2.75MHz ±0.5dB
625 Band width:	Y: 25Hz to 5.75MHz ±0.5dB Pb/Pr: 25Hz to 2.75MHz ±0.5dB
S/N ratio:	60dB or more
K factor:	1% or less
Y/PB, PR Delay:	10 nsec or less

[Component In/Component Out] with optional AJ-YA955 or AJ-956

525 Band width:	Y: 30Hz to 5.75MHz ±1dB Pb/Pr: 30Hz to 2.75MHz ±1 dB
625 Band width:	Y: 25Hz to 5.75MHz ±1dB Pb/Pr: 25Hz to 2.75MHz ±1 dB
S/N Retio:	55 dB or more
K factor:	1% or less
Y/C Delay:	10 nsec or less

[Component In/Component Out] with optional AJ-YA957 or AJ-YA958

525 Band width:	Y: 30Hz to 5.5MHz ±1dB, 5.75MHz –2dB Pb/Pr: 30Hz to 2.5MHz ±1dB, 2.75MHz –2dB
625 Band width:	Y: 25Hz to 5.5MHz ±1dB, 5.75MHz –2dB Pb/Pr: 25Hz to 2.5MHz ±1dB, 2.75MHz –2dB
S/N ratio:	55 dB or more
K factor :	1% or less
Y/PB, PR Delay:	20 nsec or less

[Composite In/Composite Out] with optional AJ-YA955 or AJ-YA956

525 Band width:	Y: 30Hz to 5.0MHz ±1dB, 5.75MHz –3dB
625 Band width:	Y: 25Hz to 5.0MHz ±1dB, 5.75MHz –3dB
K factor :	1% or less
Y/C Delay:	10 nsec or less

[Composite In/Composite Out] with optional AJ-YA957 or AJ-958

525 Band width:	Y: 30Hz to 4.5MHz ±1dB , 5.75MHz –3dB
625 Band width:	Y: 25Hz to 4.5MHz ±1dB, 5.75MHz –3dB
K factor:	1% or less
Y/C Delay:	20 nsec or less

Audio

Sampling Frequency:	48kHz (sync. with video)
Quantization:	16 bits
Frequency Response:	20Hz to 20kHz, ±1.0dB (reference level)
Dynamic Range:	More than 90dB (1kHz, emphasis off, "A" weighted)
Distortion:	within 0.05% (1kHz, reference level)
Cross Talk:	Less than –80dB (1kHz, between any 2ch)
Wow & Flutter:	Below measurable limit
Headroom:	20 dB (525)/18 dB (625)
Emphasis:	T1=50µs, T2=15µsec (ON/OFF)
Cue Track:	300Hz to 6kHz (±3dB)

Video Out Adjustment Range

Composite Video In:	±3 dB
Video Gain:	±3 dB
Chroma Gain:	±3 dB
Chroma Phase:	±30°
Setup:	±14 IRE
Sync Phase:	±8 µs
SC Phase:	±180°

Video Input

SDI:	BNC x 2 (active through), SMPTE259M-C
Reference:	BNC x 2 (loop-through) 75Ω On/Off
SDTI (option):	BNC x 2 (active through), SMPTE305M (SDI in serves as a SDTI in, too)
Analog Component: (option)	BNC x 3 (Y/Pb/Pr), Y: 1.0Vp-p, 75Ω Pb/Pr: 0.525/0.757Vp-p, switchable, 75Ω (75% color bar, 0% set up)
Analog Composite :	BNC x 2 (loop-through), (option) 75Ω On/Off

Video Output

SDI:	BNC x 3 (SDI3: Super on/off), SMPTE259M-C
Analog Composite:	BNC x 3 (Video 3: Super on/off)
SDTI (option):	BNC x 1, SMPTE305M (SDI out serves as a SDTI out, too)
Analog Component:	BNC x 3(Y/Pb/Pr), Y: 1.0Vp-p, 75Ω Pb/Pr: 0.525/0.757Vp-p, switchable, 75Ω (75% color bar, 0% set up)

Audio Input

Analog(CH1/2/3/4):	XLR x 4, +4/0/–20 dBu switchable, 600Ω/high-impedance switchable
Digital(CH1/2, CH3/4):	XLR x 2, AES/EBU
Serial Digital:	BNC x 2, (active through), SMPTE259M-C/272M
Cue:	XLR x 1, +4/0/–20/–60 dBu switchable, 600Ω/high-impedance switchable

Audio Output

Analog (CH1/2/3/4):	XLR x 4, Low-impedance, +4/0/–20 dBu switchable
Digital (CH1/2, CH3/4):	XLR x 2, AES/EBU
Serial Digital:	BNC x 1, SMPTE259M-C/272M,
Cue:	XLR x 1, Low-impedance, +4/0/–20 dBu switchable
Monitor:	XLR x 2, Low-impedance, +4/0/–20 dBu switchable
Phones:	M6, variable level control, 8Ω

Others

TC IN:	XLR x 1, 0.5 to 8.0 Vp-p
TC OUT:	XLR x 1, 2.0 Vp-p
RS-422A IN:	D-sub 9 pin RS-422A I/F
RS-422A OUT:	D-sub 9 pin RS-422A I/F
RS-232C:	D-sub 25 pin RS-232C I/F
Parallel IN/OUT:	D-sub 25 pin
Encoder Remote:	D-sub 15 pin

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.
These products may be subject to export regulations.

Panasonic

PANASONIC BROADCAST & DIGITAL SYSTEMS COMPANY
DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA

Executive Office: 3330 Cahuenga Blvd W., Los Angeles, CA 90068
(323) 436-3500

EASTERN ZONE:
Mid-Atlantic/New England: One Panasonic Way 4E-7, Secaucus, NJ 07094 (201)348-7621
Southeast Region: 1225 Northbrook Parkway, Ste 1-160 Suwanee GA 30024
(770)338-6845

Central Region: 1707 N Randall Road E1-C-1, Elgin, IL 60123 (847)468-5200
WESTERN ZONE: 3330 Cahuenga Blvd W, Los Angeles, CA 90068 (323)436-3500
Dallas Region: 6226 Abington Way, Houston, TX 77008 (713)802-2726
No. CA/Northwest Region: 5870 Stoneridge, #3, Pleasanton, CA 94588 (925)416-5102
Government Marketing Department: 52 West Gude Drive, Rockville, MD 20850 (301)738-3840

PANASONIC CANADA INC.
5770 Ambler Drive, Mississauga, Ontario L4W 2T3
(905)238-2115
PANASONIC SALES COMPANY
DIVISION OF MATSUSHITA ELECTRIC OF PUERTO RICO, INC.
San Gabriel Industrial Park 65th Infantry Ave. KM9.5
Carolina, Puerto Rico 00630 (809)750-4300
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.
VIDEO SYSTEMS DIVISION
2-15 Matsuba-cho, Kadoma, Osaka, 571-8503 Japan
Tel. 81-6-6901-1161 Fax. 81-6-6908-5969



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